



## *GIS at Iowa DOT*

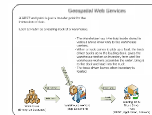
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Data with spatial, spatial is data

Leverage multiple tools to accomplish tasks (Tool belt)

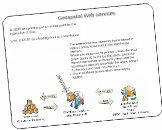
Make data available and accessible

Leverage web services



*Perform  
Manage*

Visualize data



## Performance Management

Visualize data for trends

Leverage spatial analysis

Relationships

Looking for Unknown unknowns



## Data

Open and available in predictable formats

Spatial component, natural part of things

Internet of things - how to leverage connected devices

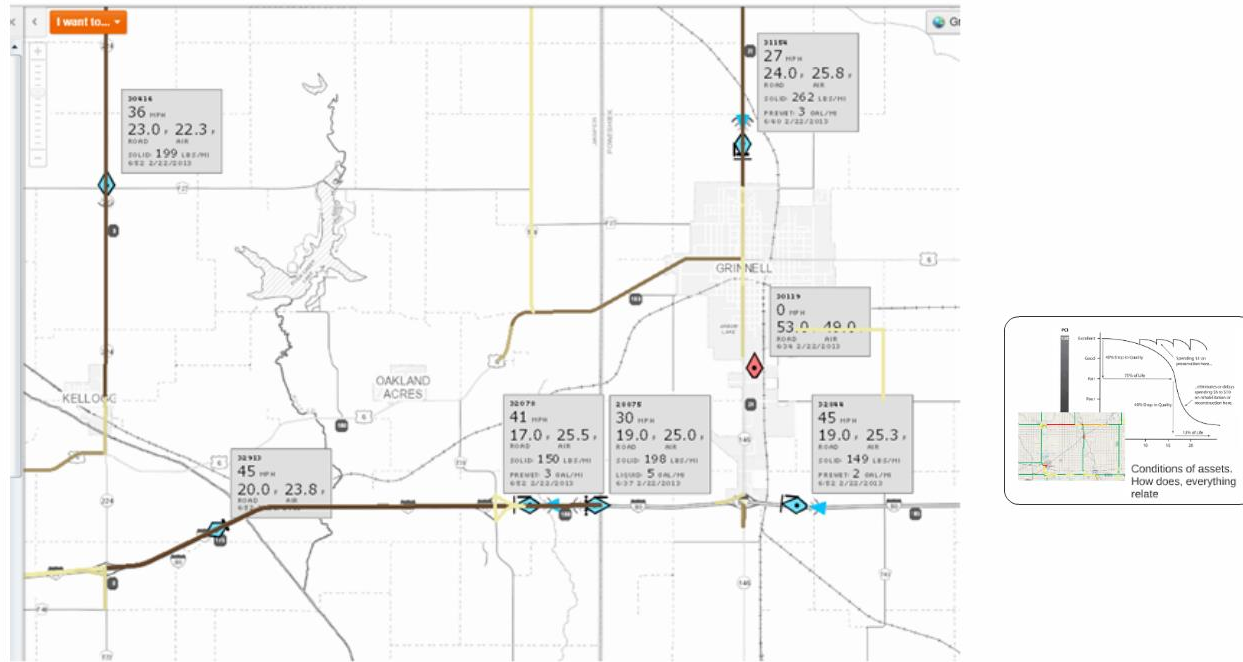
Why do road conditions with the internet of things?

It is a way to communicate to the public what roads are like.

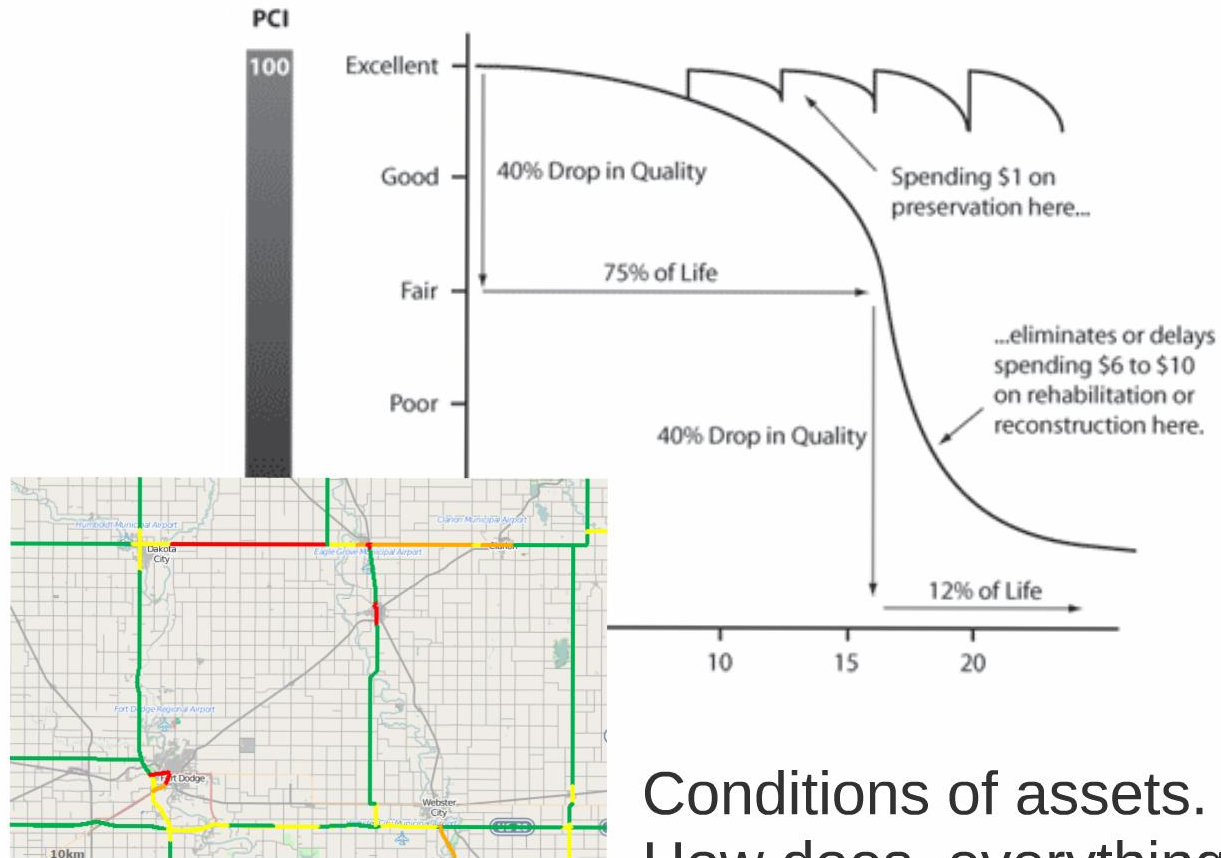
With The Internet of Things use sensors, data, observations, speeds, predictive speeds to show areas of caution/ unpredictable travel



# Define measures to look at performance



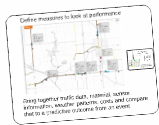
Bring together traffic data, material, sensor information, weather patterns, costs and compare that to a predictive outcome from an event



Conditions of assets.  
How does, everything  
relate

# Performance Management

e data for trends  
ge spatial analysis  
nships  
g for Unknown  
wns



## Data

Open and available in  
predictable formats

Spatial component, natural  
part of things

Internet of things - how to  
leverage connected devices

### Why do road conditions with the internet of things?

It is a way to communicate to the public  
what roads are like.

With The Internet of Things use sensors,  
data, observations, speeds, predictive  
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All relies on location



# Why do road conditions with the internet of things?

It is a way to communicate to the public what roads are like.

With The Internet of Things use sensors, data, observations, speeds, predictive speeds to show areas of caution/unpredictable travel.

All relies on location

# Working with Data

*Portfolio/Projects*

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Prioritize projects and Leverage skill sets to

- Methods to develop storage
- Methods to input/output data
- Methods to develop systems
- Methods to develop infrastructure
- Methods to construct visual interfaces

*Communication*

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Story maps  
Performance maps  
Visualization of data

*Morphing Workforce*

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GIS basic training  
Opportunities  
Access to tools, data and systems  
Ability to move things forward

*DOT Data Review*

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Introduction/Overview  
History  
Data Sources and how data is collected/managed  
Data Collection and storage  
Data Management  
Data Analysis  
Data Visualization  
Data Distribution



## *Portfolio/Projects*

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# *Communication*

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Story maps

Performance maps

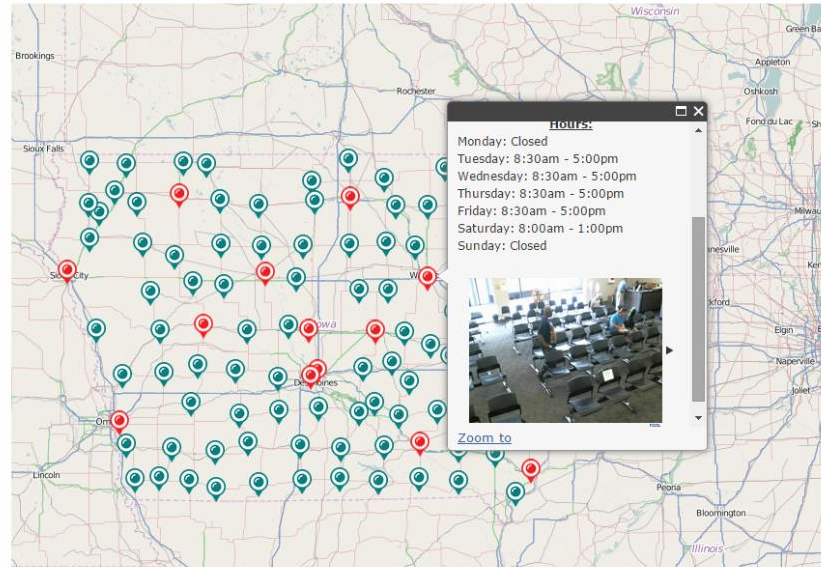
Visualization of data



Giving public visuals  
and wait times

Communicating  
performance  
measures visually to  
employees

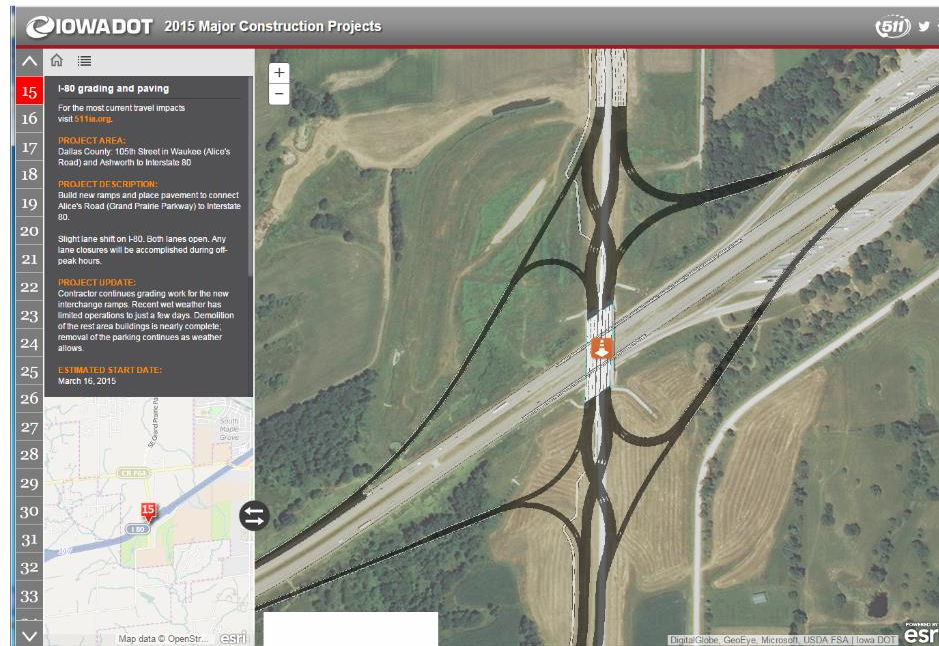
Push notifications  
when close to a DL  
station



Leverage Story Maps



# Leverage Story Maps



## *Morphing Workforce*

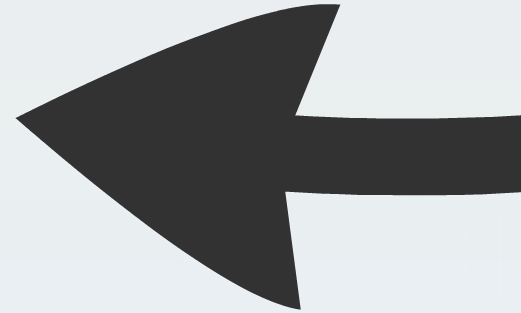
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GIS basic training

Opportunities

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Ability to move things forward



# *DOT Data Review*

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<http://iowadot.gov/gis>

REST

<https://geonexusr.iowadot.gov/arcgis/rest/services>

<https://mygeonexus.iowadot.gov/arcgis/rest/services>

AGOL

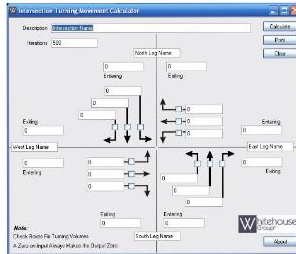
<http://services.arcgis.com/8lRhdsQyJpO52F1/ArcGIS/rest/services>



<https://geonexusr.iowadot.gov/arcgis/rest/services>



- Aerial Imagery
- Base maps
- Boundaries
- Local Projects
- DOT Projects
- Grants
- Survey
- Turning Movements
- Crash



<http://services.arcgis.com/8lRhdtS0yJpO52F1/ArcGIS/rest/services>



**Cameras**

**DMS**

**CARS 511**

**LDP**

**Plows/Plow Cam**

**Road Conditions**

